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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Administration
U.S. Bureau of Agricultural and Industrial Chemistry
Western Regional Research Laboratory, Albany, California
T. L. Swenson, Director

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A
DEHYDRATION TRAINING CONFERENCE FOR
STATE AGRICULTURAL EXPERIMENT STATION AND
EXTENSION PERSONNEL

Time and Place: May 3-12, 1943, at the Western Regional Research Laboratory, 800 Buchanan Street, Albany, California. Telephone: Landscape 5-2244. Registration will begin at 1:00 p.m., May 3. The school will begin at 2:00 p.m. and will continue, from 9:00 to 12:00 in the forenoons, and 2:00 to 5:00 in the afternoons until Wednesday May 12, inclusive. There will be no sessions on Saturday, May 8, and no evening sessions.

Nature of the Conference: Practical course of lectures and discussions on dehydration of vegetables and fruits, designed primarily for research and extension personnel of the State Land Grant Colleges and Universities of the United States. Those staff members who are engaged in research or educational work in vegetable or fruit dehydration are invited to attend.

Purpose: (1) Dissemination and exchange of the best and most recently developed technical information on vegetable and fruit dehydration. (2) Correlation of research on dehydration.

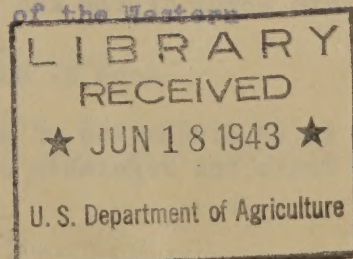
Hotels and Transportation: Reservations should be made in advance. The nearest hotels are in Berkeley. Hotels in Oakland and San Francisco are also within commuting distance. Reservations will be made for those who wish them.

Exhibits: There will be no exhibits of machinery or accessory equipment. The pilot plant in the Western Laboratory, which contains dehydration equipment of various kinds, will be used by the conference. It is suggested that those who attend bring pictures, samples, and any other material that might be of interest and use during the conference.

Procedure: Those who attend will be divided into two groups and each lecture will be presented twice, once to each group. Each group will meet regularly in a designated room where a projector and other equipment will be available. A number of sessions will be held in the pilot plant wing of the Laboratory. Lecture sessions will begin promptly on the hour and continue for 50 minutes.

Subject Matter: Short summaries of the material that will be presented and the names of the people who will be in charge are included below. Unless otherwise shown, those listed are members of the staff of the Western Regional Research Laboratory.

(over)



Subject Matter:

J. A. Berry: SANITATION

Numbers and types of micro-organisms that occur naturally on horticultural produce. Effects of their presence on raw material. Methods of prevention and control. General plant sanitation. Waste disposal. Micro-organisms in dehydrated foods.

Horace Campbell: TECHNOLOGY IN BLANCHING AND DRYING

Function of blanching. Effect of blanching and drying conditions on quality of the product. Pilot plant demonstrations.

Martha E. Davis: RECONSTITUTION AND QUALITY TESTS

Factors affecting reconstitution tests such as time, temperature, amount and quality of solution, size and shape of pieces. Results of tests to determine effect of varieties, blanching time, conditions of dehydration, storage conditions, etc.

H. L. Fevold: VITAMIN EVALUATION

Various types of vitamin determinations and their reliability and adaptability. Physical-chemical and biological methods for carotene. Chemical and biological for vitamin A. Chemical and microbiological for some of the B vitamins. Chemical methods for vitamin C.

G. C. Hanna (Calif. Agr. Expt. Sta., Davis): VARIETAL SUITABILITY

Distribution and productivity of varieties of vegetables. Suitability for dehydration.

G. T. Hemmeter: EQUIPMENT AND MECHANICAL OPERATION

Preparation equipment, blanchers, dehydraters, and other equipment. Factors in operation that make for efficiency.

H. Lineweaver: ENZYME EVALUATION

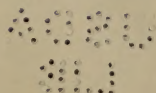
Methods of making enzyme tests. Factors influencing sensitivity of tests. Significance of enzymes in retention of quality.

B. Makower: MOISTURE DETERMINATIONS AND EQUILIBRIUM MOISTURE CONTENT

Methods of determining moisture content in fresh and dehydrated vegetables. Importance of equilibrium moisture data and application to air, vacuum, and spray drying, and packaging.

John R. Matchett: SPRAY, DRUM, AND VACUUM DRYING

Brief discussion of milk and egg drying equipment and its application to fruit and vegetable purees.



Subject Matter (Continued)

E. M. Mrak (Calif. Agr. Expt. Sta., Berkeley): DEHYDRATION OF FRUITS

Methods and problems in fruit dehydration. New developments and recent research.

W. T. Pentzer (Bur. Plant Indus., Soils, Engin., Fresno, Calif.):
HANDLING AND STORAGE OF RAW PRODUCTS

Effect of storage conditions on quality. Methods of handling and storing. Storage characteristics of varieties and types of fresh produce.

A. L. Pitman: COMPRESSION OF DRIED VEGETABLES AND PACKAGING IN GAS

Methods of compression, block densities, compression ratios, and effects of compression on quality. Results of recent studies of compression. Methods of packing certain dehydrated vegetables in inert gases.

William Rabak: STANDARD PACKAGING METHODS

Types and efficiencies of metallic and non-metallic packaging materials. Functions of packages as applied to dehydrated foods.

W. D. Ramage: LOCATION, LAYOUT, LABOR DISTRIBUTION, COSTS

Locating the plant. Buildings, floor space, layout, capital costs, labor requirements, processing costs. Segregation of costs. Other factors that enter into cost of production.

R. M. Reeve: CYTOLOGICAL EVALUATION

Cytological changes in foods in various stages of dehydration and the effect of these changes on reconstitution and quality.

W. B. Van Arsdell: PRINCIPLES OF DRYING

Physical principles involved in evaporation of water from moist solids. Relationship of these fundamental principles to the design and operation of dehydrators.

E. H. Wiegand (Oreg. Agr. Expt. Sta., Corvallis)
PREPARATION OF RAW PRODUCTS FOR DEHYDRATION

Problems involved in washing, peeling, trimming, cutting and other steps in the preparation of foods, prior to blanching and dehydration. Problems in home drying.

K. T. Williams: PHYSICAL-CHEMICAL ANALYSES

Control tests of quality in raw and finished products, such as tests for starch and sugar, tenderness, uniformity, color, and other qualities.

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Opening Sessions

In the opening session, at 2:00 p.m. Monday, May 3, Dean C. E. Hutchison of the University of California and Director T. L. Swenson of the Western Laboratory will discuss the objectives of the conference. Dr. W. V. Cruess of the University of California will discuss the background of dehydration, and Mr. E. M. Chace will discuss problems in the correlation of information. On Tuesday Dr. L. B. Howard will discuss research planning with each of the two sections.

Administration

In Charge of the Emergency Dehydration Research Project, Western Regional Research Laboratory

T. L. Swenson	- - - - -	Director of the Laboratory
E. M. Chace	- - - - -	Public Relations and Information
W. B. Van Arsdell	- - - - -	Engineering Investigations
L. B. Howard	- - - - -	Technological Investigations

A. P. Aanestad	- - - - -	Business Manager
J. T. Allison	- - - - -	Photographer
P. L. Blake	- - - - -	Mechanical Services
H. C. Diehl	- - - - -	In Charge of Dehydration Conference
R. H. Nagel	- - - - -	Housing, Food, and Transportation
R. T. Prescott	- - - - -	Information
W. L. Shaw	- - - - -	Librarian
R. P. Straka	- - - - -	Procurement and General Arrangements
Mrs. Marybelle Wygant	- - - - -	Secretary

Address all correspondence to
Dr. T. L. Swenson, Director,
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